



**6560-50-P**

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 51**

**[EPA-HQ-OAR-2013-0795; FRL-9942-80-OAR]**

**RIN 2060-AR65**

**Air Quality: Revision to the Regulatory Definition of Volatile Organic Compounds – Requirements for t-Butyl Acetate**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is amending the EPA's regulatory definition of volatile organic compounds (VOC) under the Clean Air Act (CAA). The regulatory definition of VOC currently excludes t-butyl acetate (also known as tertiary butyl acetate or TBAC; CAS Number: 540-88-5) for purposes of VOC emissions limitations or VOC content requirements on the basis that it makes a negligible contribution to tropospheric ozone formation. However, the current definition includes TBAC as a VOC for purposes of all recordkeeping, emissions reporting, photochemical dispersion modeling and inventory requirements which apply to VOC. This final action removes the recordkeeping, emissions reporting, photochemical dispersion modeling and inventory requirements related to the use of TBAC as a VOC.

**DATES:** This final rule is effective on **[INSERT DATE 60 DAYS AFTER PUBLICATION IN THE *FEDERAL REGISTER*]**.

**ADDRESSES:** The EPA has established a docket for this action under Docket ID No.

EPA-HQ-OAR-2013-0795. All documents in the docket are listed on the [www.regulations.gov](http://www.regulations.gov) website. Although listed in the index, some information is not publicly available, i.e., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through [www.regulations.gov](http://www.regulations.gov).

**FOR FURTHER INFORMATION CONTACT:** Ms. Souad Benromdhane, Office of Air Quality Planning and Standards, Health and Environmental Impacts Division, Mail Code C539-07, Environmental Protection Agency, Research Triangle Park, NC 27711; telephone: (919) 541-4359; fax number: (919) 541-5315; email address: [benromdhane.souad@epa.gov](mailto:benromdhane.souad@epa.gov).

**SUPPLEMENTARY INFORMATION:**

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## **I. General Information**

### *A. Does this action apply to me?*

Entities affected by this final rule include, but are not necessarily limited to, state and local air pollution control agencies that prepare VOC emission inventories and ozone attainment demonstrations for state implementation plans (SIPs). These agencies are relieved of the requirements to separately inventory emissions of TBAC. This final action may also affect manufacturers, distributors and users of TBAC and TBAC-containing products, which may include paints, inks and adhesives. This action allows state air agencies to no longer require these entities to report emissions of TBAC.

### *B. Where can I get a copy of this document and other related information?*

In addition to being available in the docket, an electronic copy of this final rule will also be available on the Worldwide Web (WWW) through the Technology Transfer Network (TTN). Following the Administrator's signature, a copy of this final rule will be posted on the TTN's policy and guidance page for promulgated rules at the following

address:

<http://www.epa.gov/airquality/ozonepollution/actions.html#impl>. The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP Line at (919) 541-4814.

### *C. Judicial Review*

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the District of Columbia Circuit Court within 60 days from the date the final action is published in the *Federal Register*. Filing a petition for review by the Administrator of this final action does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review must be filed, and shall not postpone the effectiveness of such action. Thus, any petitions for review of this final action related to the elimination of recordkeeping of TBAC must be filed in the Court of Appeals for the District of Columbia Circuit within 60 days from the date this final action is published in the *Federal Register*.

## **II. Background**

### *A. The EPA's VOC Exemption Policy*

Tropospheric ozone, commonly known as smog, is formed when VOC and nitrogen oxides (NO<sub>x</sub>) react in the atmosphere in the presence of sunlight. Because of the harmful health effects of ozone, the EPA and state governments limit the amount of VOC that can be released into the atmosphere. VOCs are organic compounds of carbon, many of which form ozone through atmospheric photochemical reactions. Different VOC have different

levels of reactivity. That is, they do not react to form ozone at the same speed or to the same extent. Some VOC react slowly or form less ozone; therefore, changes in their emissions have limited effects on local or regional ozone pollution episodes. It has been the EPA's policy that organic compounds with a negligible level of reactivity should be excluded from the regulatory definition of VOC so as to focus control efforts on compounds that do significantly affect ozone concentrations. The EPA also believes that exempting such compounds creates an incentive for industry to use negligibly reactive compounds in place of more highly reactive compounds that are regulated as VOC. The EPA lists compounds that it has determined to be negligibly reactive in its regulations as being excluded from the regulatory definition of VOC (40 CFR 51.100(s)).

The CAA requires the regulation of VOC for various purposes. Section 302(s) of the CAA specifies that the EPA has the authority to define the meaning of "VOC," and hence what compounds shall be treated as VOC for regulatory purposes. The policy of excluding negligibly reactive compounds from the regulatory definition of VOC was first laid out in the "Recommended Policy on Control of Volatile Organic Compounds" (42 FR 35314, July 8, 1977) and was supplemented subsequently with the "Interim Guidance on Control of Volatile Organic Compounds in Ozone State Implementation Plans" (70 FR 54046, September 13, 2005) (from here forward referred to as the 2005 Interim Guidance). The EPA uses the reactivity of ethane as the threshold for determining whether a compound has negligible reactivity. Compounds that are less reactive than, or equally reactive to, ethane under certain assumed conditions may be deemed negligibly reactive and, therefore, suitable for exemption by the EPA from the regulatory definition of VOC.

Compounds that are more reactive than ethane continue to be considered VOC for regulatory purposes and, therefore, are subject to control requirements. The selection of ethane as the threshold compound was based on a series of smog chamber experiments that underlay the 1977 policy.

The EPA uses two different metrics to compare the reactivity of a specific compound to that of ethane: (1) the reaction rate constant (known as  $k_{OH}$ ) with the hydroxyl radical (OH); and (2) the maximum incremental reactivity (MIR) on ozone production per unit mass basis. Differences between these metrics and the rationale for their selection is discussed further in the 2005 Interim Guidance.

*B. History of the VOC Exemption for TBAC Including the Unique Recordkeeping, Emissions Reporting, Photochemical Dispersion Modeling and Inventory Requirements*

On January 17, 1997, ARCO Chemical Company (now known as and from here forward referred to as LyondellBasell) submitted a petition to the EPA, which requested that the EPA add TBAC to the list of compounds that are designated negligibly reactive in the regulatory definition of VOC at 40 CFR 51.100(s). The materials submitted in support of this petition are contained in Docket EPA-HQ-OAR-2003-0084. LyondellBasell's case for TBAC being less reactive than ethane was based primarily on the use of relative incremental reactivity factors set forth in a 1997 report by Carter, *et al.*<sup>1</sup> Although the  $k_{OH}$

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<sup>1</sup> Carter, William P.L., Dongmin Luo, and Irina L. Malkina (1997). Investigation of the Atmospheric Ozone Formation Potential of T-Butyl Acetate, Report to ARCO Chemical Corporation, Riverside: College of Engineering Center for Environmental Research and Technology, University of California, 97-AP-RT3E-001-FR, <http://www.cert.ucr.edu/~carter/pubs/tbuacetr.pdf>.

values for TBAC are higher than for ethane, Carter's results indicated that the MIR value for TBAC, expressed in units of grams of ozone per gram of TBAC, was between 0.43 and 0.48 times the MIR for ethane, depending on the chemical mechanism used to calculate the MIR. In other words, TBAC formed less than half as much ozone as an equal mass of ethane under the conditions assumed in the calculation of the MIR scale.

On September 30, 1999, the EPA proposed to revise the regulatory definition of VOC to exclude TBAC, relying on the comparison of MIR factors expressed on a mass basis to conclude that TBAC is negligibly reactive (64 FR 52731, September 30, 1999). However, in the final rule, the EPA concluded at that time that even “negligibly reactive” compounds may contribute significantly to ozone formation if present in sufficient quantities and that emissions of these compounds need to be represented accurately in photochemical modeling analyses. In addition to these general concerns about the potential cumulative impacts of negligibly reactive compounds, the need to maintain recordkeeping and reporting requirements for TBAC was further justified by the potential for widespread use of TBAC, the fact that its relative reactivity falls close to the borderline of what has been considered negligibly reactive, and continuing efforts to assess long-term health risks.<sup>2</sup> Based on these conclusions, in 2004, the EPA promulgated a final rule that

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<sup>2</sup> Between the EPA's proposed and final rule exempting TBAC as a VOC, the state of California raised concerns to the EPA about the potential carcinogenicity of tertiary-butanol, or TBA, the principal metabolite of TBAC. At the time, the EPA decided that there was insufficient evidence of health risks to affect the exemption decision, but persuaded LyondellBasell to voluntarily perform additional toxicity testing, use the testing results in a health risk assessment, and have the testing and assessment results reviewed in a peer consultation.

excluded TBAC from the definition of VOC for purposes of VOC emissions limitations or VOC content requirements, but continued to define TBAC as a VOC for purposes of all recordkeeping, emissions reporting, photochemical dispersion modeling and inventory requirements that apply to VOC (69 FR 69298, November 29, 2004) (from here forward referred to as the 2004 Final Rule).

In the 2004 Final Rule, the EPA argued that the recordkeeping and reporting requirements were not new requirements for TBAC as industry and states were already subject to such requirements to report TBAC as a VOC prior to the exemption. However, in practice, the rule created a new, distinct recordkeeping and reporting burden by requiring that TBAC be “uniquely identified” in emission reports, rather than aggregated with other compounds as VOC. The final rule explained that the EPA was in the process of reviewing its overall VOC exemption policy and that the potential for retaining recordkeeping and reporting requirements for compounds exempted from the definition of VOC in the future would be considered in that process. That process led to the development of the 2005 Interim Guidance, which encouraged the development of speciated inventories for highly reactive compounds and identified the voluntary submission of emissions estimates for exempt compounds as an option for further consideration, but did not recommend mandatory reporting requirements associated with future exemptions. Thus, TBAC was the only compound that was excluded from the VOC definition for purposes of emission controls but was still considered a VOC for purposes of recordkeeping and reporting requirements.



### *Exemption*

The EPA received a petition from LyondellBasell in December 2009, which was re-affirmed in November 2011, requesting the removal of recordkeeping and reporting requirements from the final rule to exempt TBAC from the regulatory VOC definition. LyondellBasell contends that the emissions reporting requirements are redundant and present an unnecessary burden. In 2015, the EPA issued a proposed rule (80 FR 6481, February 5, 2015)<sup>3</sup> in order to relieve manufacturers and users from recordkeeping and reporting requirements that were part of the 2004 Final Rule.

### **III. The EPA's Assessment of the Petition**

In most cases, when a negligibly reactive VOC is exempted from the definition of VOC, emissions of that compound are no longer recorded, collected, or reported to states or the EPA as part of VOC emissions. When the EPA exempted TBAC from the VOC definition for purposes of control requirements in the 2004 Final Rule, the EPA created a new category of compounds and a new reporting requirement that required that emissions of TBAC be reported separately by states and, in turn, by industry. However, the EPA did not issue any guidance on how TBAC emissions should be tracked and reported, and implementation of this requirement by states has been inconsistent. A few states have modified their rules and emissions inventory processes to track TBAC emissions separately and provide that information to the EPA. Others have included TBAC with other undifferentiated VOC in their emissions inventories. Thus, the data that have been

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<sup>3</sup> See <http://www.gpo.gov/fdsys/pkg/FR-2015-02-05/pdf/2015-02325.pdf>.

reported to date as a result of these requirements are incomplete and inconsistent. In addition, the EPA has not established protocols for receiving and analyzing TBAC emissions data collected under the requirements of the 2004 Final Rule.

Although the reactivity of TBAC and other negligibly reactive compounds is low, if emitted in large quantities, they could still contribute significantly to ozone formation in some locations. However, without speciated emissions estimates or extensive speciated hydrocarbon measurements, it is difficult to assess the impacts of any one exempted compound or even the cumulative impact of all of the exempted compounds.

In the 2004 Final Rule, the EPA stated the primary objective of the recordkeeping and reporting requirements for TBAC was to address these cumulative impacts of “negligibly reactive” compounds and suggested that future exempt compounds may also be subject to such requirements. However, such requirements have not been included in any other proposed or final VOC exemptions since the TBAC decision. Having high quality data on TBAC emissions alone is unlikely to be very useful in assessing the cumulative impacts of these compounds on ozone formation. Thus, the requirements are not achieving their primary objective to inform more accurate photochemical modeling in support of SIP submissions.

In the 2004 Final Rule, EPA also noted that recordkeeping and reporting requirements were justified in light of the continuing efforts to characterize long-term health risks associated with TBAC and its metabolite tertiary-butyl alcohol (TBA). Since the rule was finalized, those efforts have resulted in at least two studies regarding the long-term health risks associated with TBAC and TBA. LyondellBasell performed

additional toxicity testing and a health risk assessment and submitted the peer-consultation results to the EPA in 2009.<sup>4</sup> In addition, in 2006, the state of California published its own assessment of the potential health effects associated with TBA and TBAC.<sup>5</sup> Also, the EPA is currently in the process of assessing the evidence for health risks from TBA through its Integrated Risk Information System (IRIS) program.<sup>6</sup> This is the first IRIS assessment for TBA. A draft of this assessment is expected to be released for public comment later this year. However, the existing toxicity information being examined in the IRIS assessment does not rely on any of the data collected through the recordkeeping and reporting requirements at issue in this rule, and, thus, continuation of those requirements does not appear relevant to any likely future determinations about the health risks associated with TBAC or TBA.

#### **IV. Public Comments**

The EPA received five comments on the proposed rule referenced above from

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<sup>4</sup> Toxicology Excellence for Risk Assessment (2009). Report of the Peer Consultation of the Potential Risk of Health Effects from Exposure to Tertiary-Butyl Acetate, January 7-8, 2009, Northern Kentucky University METS Center, Erlanger, Kentucky, Volumes I and II, <http://www.tera.org/Peer/TBAC/index.html>.

<sup>5</sup> Luo, Dongmin, *et al.* (2006) *Environmental Impact Assessment of Tertiary-Butyl Acetate, Staff Report*, Sacramento: California Environmental Protection Agency, Air Resources Board, January 2006, <http://www.arb.ca.gov/research/reactivity/tbacf.pdf>; <http://www.arb.ca.gov/research/reactivity/tbac1.pdf>; <http://www.arb.ca.gov/research/reactivity/tbac2.pdf>; and Budroe, John D., et al (2015) *Tertiary Butyl Acetate Inhalation Cancer Unit Risk Factors, Appendix B*, Public Review Draft August 2015. California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, [http://oehha.ca.gov/air/hot\\_spots/pdf/PublicReviewDraftTBAC\\_URF081415.pdf](http://oehha.ca.gov/air/hot_spots/pdf/PublicReviewDraftTBAC_URF081415.pdf).

<sup>6</sup> See [http://www.epa.gov/iris/publicmeeting/iris\\_bimonthly-dec2013/mtg\\_docs.htm#etbe](http://www.epa.gov/iris/publicmeeting/iris_bimonthly-dec2013/mtg_docs.htm#etbe).

industry in support of this final action. No adverse comments were received.

## **V. Final Action**

The EPA is removing the recordkeeping, emissions reporting, photochemical dispersion modeling and inventory requirements for TBAC.

There is no evidence that TBAC is being used at levels that would cause concern for ozone formation. Additionally, the EPA believes these requirements, which are unique among all VOC-exempt compounds, are of limited utility because they do not provide sufficient information to judge the cumulative impacts of exempted compounds, and because the data have not been consistently collected and reported. Because these requirements are not addressing any of the concerns as they were intended, the EPA is removing the requirements for TBAC to relieve industry and states of the associated information collection burden.

This final action removes recordkeeping, emissions reporting, photochemical dispersion modeling and inventory requirements related to the use of TBAC. This action does not affect the existing exclusion of TBAC from the regulatory definition of VOC for purposes of emission limits and control requirements.

We note that removal of the recordkeeping and reporting requirements does not indicate that the EPA has reached final conclusions about all aspects of the health effects posed by the use of TBAC or its metabolite TBA. The EPA is currently awaiting completion of the IRIS assessment on the potential risks involved with TBA and its toxicity. If it becomes clear that action is warranted due to the health risks of direct exposure to TBA or TBAC, the EPA will consider the range of authorities at its disposal to

mitigate these risks appropriately.

## **VI. Statutory and Executive Order Reviews**

### *A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review*

This action is not a significant regulatory action and was therefore not submitted to the Office of Management and Budget (OMB) for review.

### *B. Paperwork Reduction Act (PRA)*

This action does not impose an information collection burden under the PRA. It does not contain any new recordkeeping or reporting requirements. This action removes recordkeeping, emissions reporting, photochemical dispersion modeling and inventory requirements related to use of TBAC.

### *C. Regulatory Flexibility Act (RFA)*

After considering the economic impacts of the TBAC final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden or otherwise has a positive economic effect on the small entities subject to the rule. This action removes recordkeeping, emissions reporting, photochemical dispersion modeling and inventory requirements related to use of TBAC. We have, therefore, concluded that this action will relieve regulatory burden for all directly regulated small entities.

*D. Unfunded Mandates Reform Act (UMRA)*

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531-1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local or tribal governments or the private sector.

*E. Executive Order 13132: Federalism*

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. In fact, this should reduce the burden on states.

*F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments*

This action does not have tribal implications, as specified in Executive Order 13175. This final action removes existing emission inventory reporting and other requirements that uniquely apply to TBAC among all VOC-exempt compounds. Thus, Executive Order 13175 does not apply to this action.

*G. Executive Order 13045: Protection of Children from Environmental Health and Safety Risks*

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of “covered regulatory action” in section 2-202 of the Executive Order. This action is not subject to Executive Order 13045

because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action removes recordkeeping, emissions reporting, photochemical dispersion modeling and inventory requirements related to use of TBAC. It does not affect the existing exclusion of TBAC from the regulatory definition of VOC for purposes of emission limits and control requirements.

*H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use*

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

*I. National Technology Transfer and Advancement Act (NTTAA)*

This rulemaking does not involve technical standards.

*J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*

The EPA believes the human health or environmental risk addressed by this action will not have disproportionately high and adverse human health or environmental effects on minority, low-income or indigenous populations. The EPA did not conduct an environmental analysis for this rule because the EPA does not believe that removing the unique reporting requirements will lead to substantial and predictable changes in the use of TBAC in and near particular communities.

*K. Congressional Review Act (CRA)*

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is

not a “major rule” as defined by 5 U.S.C. 804(2).

**List of Subjects in 40 CFR Part 51**

Environmental protection, Administrative practice and procedure, Air pollution control, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: February 17, 2016.



Gina McCarthy,  
Administrator.

For the reasons stated in the preamble, title 40, chapter I, part 51 of the Code of Federal Regulations is amended as follows:

**PART 51 -- REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS**

**Subpart F -- Procedural Requirements**

1. The authority citation for part 51, subpart F, continues to read as follows:

**Authority:** 42 U.S.C. 7401, 7411, 7412, 7413, 7414, 7470-7479, 7501-7508, 7601, and 7602.

2. Section 51.100 is amended by:

- a. Revising the introductory text of paragraph (s)(1); and
- b. Removing and reserving paragraph (s)(5).

The addition reads as follows:

**§51.100 Definitions.**

\* \* \* \* \*

(s)(1) This includes any such organic compound other than the following, which have been determined to have negligible photochemical reactivity: methane; ethane; methylene chloride (dichloromethane); 1,1,1-trichloroethane (methyl chloroform); 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113); trichlorofluoromethane (CFC-11); dichlorodifluoromethane (CFC-12); chlorodifluoromethane (HCFC-22); trifluoromethane (HFC-23); 1,2-dichloro 1,1,2,2-tetrafluoroethane (CFC-114); chloropentafluoroethane (CFC-115); 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123); 1,1,1,2-tetrafluoroethane (HFC-134a); 1,1-dichloro 1-fluoroethane (HCFC-141b); 1-chloro 1,1-difluoroethane

(HCFC-142b); 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124); pentafluoroethane (HFC-125); 1,1,2,2-tetrafluoroethane (HFC-134); 1,1,1-trifluoroethane (HFC-143a); 1,1-difluoroethane (HFC-152a); parachlorobenzotrifluoride (PCBTf); cyclic, branched, or linear completely methylated siloxanes; acetone; perchloroethylene (tetrachloroethylene); 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca); 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb); 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee); difluoromethane (HFC-32); ethylfluoride (HFC-161); 1,1,1,3,3,3-hexafluoropropane (HFC-236fa); 1,1,2,2,3-pentafluoropropane (HFC-245ca); 1,1,2,3,3-pentafluoropropane (HFC-245ea); 1,1,1,2,3-pentafluoropropane (HFC-245eb); 1,1,1,3,3-pentafluoropropane (HFC-245fa); 1,1,1,2,3,3-hexafluoropropane (HFC-236ea); 1,1,1,3,3-pentafluorobutane (HFC-365mfc); chlorofluoromethane (HCFC-31); 1-chloro-1-fluoroethane (HCFC-151a); 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a); 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane ( $C_4F_9OCH_3$  or HFE-7100); 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane ( $((CF_3)_2CFCF_2OCH_3)$ ); 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane ( $C_4F_9OC_2H_5$  or HFE-7200); 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane ( $((CF_3)_2CFCF_2OC_2H_5)$ ); methyl acetate; 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-C<sub>3</sub>F<sub>7</sub>OCH<sub>3</sub>, HFE-7000); 3-ethoxy- 1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE-7500); 1,1,1,2,3,3,3-heptafluoropropane (HFC 227ea); methyl formate (HCOOCH<sub>3</sub>); 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE-7300); propylene carbonate; dimethyl carbonate; *trans*-1,3,3,3-tetrafluoropropene; HCF<sub>2</sub>OCF<sub>2</sub>H

(HFE-134);  $\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$  (HFE-236cal2);  $\text{HCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$  (HFE-338pcc13);  
 $\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$  (H-Galden 1040x or H-Galden ZT 130 (or 150 or 180)); *trans*  
1-chloro-3,3,3-trifluoroprop-1-ene; 2,3,3,3-tetrafluoropropene;  
2-amino-2-methyl-1-propanol; t-butyl acetate; and perfluorocarbon compounds which fall  
into these classes:

\* \* \* \* \*

(5) [Reserved]

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[FR Doc. 2016-04072 Filed: 2/24/2016 8:45 am; Publication Date: 2/25/2016]